BODY FLUIDS IN SURGERY. By A. W. Wilkinson, M.Ch., F.R.C.S. (Pp. ix+212; figs. 6. tables 29. 16s.) London and Edinburgh: E. & S. Livingstone, 1955.

SUFFICIENT knowledge of the physiological mechanisms which regulate the volumes and composition of the body fluids now exists to permit a logical approach to therapy of fluid and electrolyte imbalance. This book aims to set out, in reasonable compass, the aspects of this subject of particular interest to surgeons in the management of their clinical problems. In the main, this purpose is achieved. The author divides his subject into chapters on the body fluid, the chief body cations, acid-base balance, and the effects of shock and various types of fluid and electrolyte imbalance. Each chapter commences with a short physiological introduction, follows with a discussion of the causes of, and the clinical and metabolic results of derangement of body chemistry, and concludes with a section on treatment. This presentation is satisfactory, and avoids undue repetition in the various chapters.

In the discussion on the exchanges of fluid between the extracellular and the intracellular phases, insufficient emphasis is laid on the importance of the osmotic regulation of the movement of water between the body compartments. This concept is so fundamental that it might be considered more fully and illustrated diagramatically. In the section devoted to the treatment of hyponatræmia and cellular overhydration, the author correctly advocates the administration of hypertonic saline; but he does not indicate that the amount of salt, in excess of water, that is required to achieve correction may be calculated as the product of the fall in sodium concentration below normal multiplied by the total body water (estimated as 60 per cent. of the body weight).

The chapter on potassium contains two errors of statement concerning the metabolic consequences of potassium depletion. On p. 51 it is stated that Black and Milne observed extracellular acidosis in two subjects depleted of potassium by dietary restriction, whereas these workers showed that extracellular alkalosis resulted. Fourman and Ainley-Walker produced potassium depletion and acidosis, but in their study the depletion was induced by the ingestion of an exchange resin in the ammonium cycle. Uncomplicated potassium depletion is always accompanied by an alkalosis. On p. 48 it is stated that the shift of sodium into cells that occurs in potassium depletion results in a contraction of the extracellular fluid. This only occurs if sodium intake is simultaneously restricted. Potassium depletion is usually accompanied by retention of sodium in, and expansion of, the extracellular fluid. Clinically, œdema may occur. In the treatment of potassium depletion more stress might be laid on the fact that in many instances of potassium loss there may also be severe losses of salt, with resultant contraction of the extracellular fluid volume. In these circumstances, the initial concentration of potassium in the serum may be well above normal, despite an overall potassium deficit. Appreciation of this fact would lead to modification of the advice that in pyloric stenosis, "The replacement of potassium is therefore the primary consideration, and potassium chloride should first be administered, followed by a mixture of potassium and sodium chloride" (p. 111). Such a line of treatment would lead to a dangerous hyperkalæmia in a significant proportion of cases.

The concluding chapters on "The influence of associated disease on fluid and electrolyte balance," on "Diagnosis," and on "Treatment" are satisfactory, except that it is doubtful whether the scheme for calculating losses of fluid and electrolyte given on pp. 152-153 would be very useful in practice.

R. W.

NURSING CARE OF THE NEWLY BORN INFANT. By W. S. Craig, B.Sc., M.D., F.R.C.P.(Edin.), M.R.C.P., in collaboration with M. F. G. Buchanan, M.B., B.Ch., M.R.C.P.(Edin.), and R. J. Pugh, M.B., Ch.B., M.R.C.P., and M. Pattullo, R.G.N., S.C.M. (Pp. viii+472; figs. 224. 35s.) Edinburgh and London: E. & S. Livingstone, 1955.

THIS book covers fully that most important period, the first month of life. It contains much practical advice and is especially written for nurses. This volume should be of particular value for the pupil or practising midwife and children's nurse; it should be read also by the candidate for the Diploma of Child Health.

O. D. F.